§§ 1.1307(b), 1.1310, so too does it restrict emissions from base stations, *id.* §§ 22.913, 24.232. All equipment must be FCC certified. *Id.* §§ 22.377, 24.51. The FCC also imposes a variety of registration requirements to satisfy before deployment, *see, e.g., id.* § 17.4, and the Act establishes federal standards that limit local authority over the location of cell phone towers. 47 U.S.C. § 332(c)(7).

Of course, a wireless network is of limited use to customers if they cannot call users of other networks, so the FCC regulates interconnection between wireless networks and the facilities of local exchange carriers. *See, e.g.*, 47 C.F.R. § 20.11. FCC rules likewise govern roaming between the mobile networks of different carriers. *See id.* § 20.12(c).[5]

When a carrier has spectrum, an approved phone, and a built-out, interconnected, and duly registered network in place, it is ready to serve customers in a relationship that is also supervised by federal rules. The FCC regulates 911 service, *see, e.g.*, 47 C.F.R. § 20.18; number portability (i.e., allowing customers to keep their phone numbers when changing carriers), *see, e.g., id.* § 52.31; disability access, *see, e.g., id.* § 6.1(b)(1); use of proprietary customer information by carriers, *see* 47 C.F.R. Pt. 64, Subpart U; and billing, *see, e.g.*, 47 C.F.R. § 64.2401. Carriers must ensure law enforcement access to certain data. *Id.* §§ 22.1100, 24.900. They must contribute to funds supporting universal service. *Id.* § 54.706. And if they decide to leave the business and transfer their licenses, they must first obtain FCC approval. 47 U.S.C. § 310(d). Finally, wireless service providers are under a statutory duty to ensure that their "charges, practices,

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[5] The requirements described above are by no means exhaustive. For example, carriers are also subject to a variety of federal registration and reporting requirements. Carriers must register with the FCC before providing service. *Id.* § 64.1195. They must likewise obtain FCC authorization before providing international service. *Id.* § 63.18. Applicable reporting obligations range from notifying the FCC of network outages, *see id.* § 4.9(e), to annual international traffic figures, *id.* § 43.61, to employment data, *id.* § 1.815.

classifications, and regulations for and in connection with [their] communications service[s] shall be just and reasonable." 47 U.S.C. § 201(b); *see also* 47 U.S.C. § 332(c)(1) (declaring that wireless service providers are common carriers).

It simply cannot be said that this comprehensive regulation of the wireless industry does not qualify as a "significant federal presence."

II. STATE RF REGULATIONS WILL DESTABILIZE THE WIRELESS INDUSTRY AND HARM MOBILE SERVICE

The panel majority's refusal to follow *Locke* set the stage for its failure to appreciate the conflict between local and national rules presented by this case. By ignoring the comprehensive federal regulation of wireless service, the panel failed to consider the destabilizing consequences of its holding to the wireless industry and its customers. The wireless industry could not function if every federal rule were open to supplementation by local regulators or juries. This is particularly true of regulations affecting RF emissions. Permitting each state to decide for itself how much RF emissions are too much, or how mobile phones should be designed and marketed, will throw the industry into disarray. State restrictions on handset emissions will produce gaps in coverage and frustrate consumers trying to use their mobile phones when traveling between states. This patchwork regime will also needlessly divert carrier resources into constructing new cell towers to compensate for reduced network coverage instead of developing the new products and services demanded by consumers. The threat of disruption to so important a component of the Nation's economy and infrastructure is reason enough for this Court to grant the petition.[7]

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[7] Indeed, the panel decision imperils a regulatory success story. Consumers have benefited greatly from Congress's decision to vest authority over wireless services with the FCC instead of the states. Pet. 8. As of December 2004, wireless carriers served over 181 million subscribers, compared to just 16 million at the end of 1993 when Congress preempted rate and entry regulation by the states, and *surpassing* the num-

1. The opinion below rests on an unworkable distinction between RF emissions from wireless handsets and emissions from wireless base stations. The panel majority held that states may regulate one, but not the other. Pet. 28; Pet. App. 40a. This ruling lacks any limiting principle that would cabin its scope to the plaintiffs' requested relief of a "headset" mandate and warnings regarding the purported dangers of wireless phones. The central premise of the litigation is that RF emissions from wireless phones are too high. Nothing in the Fourth Circuit's approach will prevent future plaintiffs from demanding alternative, and even more costly, forms of relief, such as antennae redesign, device shields, or an order to reduce RF emissions.

Moreover, the panel's dichotomy between wireless telephones and their network of base stations is untenable as a practical matter. Wireless telephony involves constant, two-way interactions between handsets and base stations. A mobile phone is useless if it cannot reach the local network. As the FCC has repeatedly recognized, a network's range therefore depends on the transmitting power of *both* handsets and base stations. Each is equally important in determining where mobile telephones will work. Memorandum Opinion and Order, *Amendment of the Commission's Rules to Establish New Personal Communications Services*, 9 FCC Rcd 4957, 5025 ¶ 173 (1994).[5] Accordingly, when the

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ber of traditional landlines in service. *See Local Telephone Competition: Status as of December 31*, FCC Wireline Competition Bureau Report 1 (rel. July 8, 2005), *available at* http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/IAD/lcom0705.pdf; *Trends in Telephone Service*, FCC Wireline Competition Bureau Report, Table 11.1 (rel. June 21, 2005), *available at* http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/IAD/trend605.pdf.

[5] *See, e.g.*, Notice of Proposed Rulemaking, *Facilitating the Provision of Spectrum-Based Services to Rural Areas and Promoting Opportunities for Rural Telephone Companies to Provide Spectrum-Based Services*, 18 FCC Rcd 20802, 20830 ¶ 52 (2003) ("*Rural NPRM*") ("[S]imply guaranteeing that a mobile unit can 'hear' the base station, however, is not sufficient for two-way communications. . . . [t]he base station must be able to 'hear' the mobile unit."); Report and Order and Further Notice of Pro-

FCC established permissible handset power levels, it balanced the importance of coverage against any potential health and safety effects of RF emissions. *Id.* at 5025 ¶ 174 (declining to raise permitted power levels for portable units in order to limit RF exposure and interference).

Permitting state regulators, be they utility commissioners or local juries, to rebalance these considerations will disrupt service. Wireless carriers have designed and deployed their networks of base stations to accommodate the FCC's RF regulations. In fact, carriers typically strive to keep handset emissions as low as possible, even below federal limits, in order to maximize battery life and minimize interference. Theodore S. Rappaport, *Wireless Communications: Principles and Practice* 76-77 (2d ed. 2002).[9] Requiring carriers to reduce RF emissions further cannot help but create gaps in network coverage where handsets cannot reach the nearest base station. *Rural NPRM*, 18 FCC Rcd at 20830 ¶ 52 ("[A]t the fringe of the base station coverage area, the most significant limiting factors to two-way transmissions are the power level and the location *of the mobile unit*." (emphasis added)). These gaps in coverage will be especially problematic in rural areas, where carriers space their cells more widely than in more densely populated cities and towns. The panel decision thus undermines the Nation's policy of promoting wireless deployment in less densely populated regions. *Id.* ¶ 1.

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posed Rulemaking, *Extending Wireless Telecommunications Services to Tribal Lands*, 15 FCC Rcd 11794, 11810 ¶ 43 (2000) ("[I]ncreasing the base-to-mobile range of wireless base stations through height and power increases does not necessarily facilitate the provision of service, because this may require a corresponding increase in power . . . of mobile units to achieve the same mobile-to-base range.").

[9] *See also* Report and Order and Further Notice of Proposed Rulemaking, *Facilitating the Provision of Spectrum-Based Services to Rural Areas and Promoting Opportunities for Rural Telephone Companies to Provide Spectrum-Based Services*, 19 FCC Rcd 19078, 19130-19131 ¶ 93 (2004) ("*Rural R&O*") ("Today's handsets generally utilize low power in order to comply with our RF safety rules and to extend battery life.").

Allowing state rules that effectively set local RF emissions levels will lead to networks with dramatically reduced capabilities. It will mean more limited wireless service inside buildings. Rappaport, *supra*, at 157-66 (summarizing data on signal loss inside buildings). It will mean less effective wireless data services (such as mobile e-mail or Internet access), whose transmission speed is affected by signal strength. Lawrence Harte, *Introduction to EVDO: Physical Channels, Logical Channels, Network and Operation* 13, 23 (2004). Such rules therefore will undermine the federal policy of promoting the next generation of advanced services. *See, e.g.*, Second Report and Order, *Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, Including Third Generation Wireless Systems*, 17 FCC Rcd 23193 (2002).

The economic consequences of disparate state RF and equipment mandates will spread beyond any one state's borders. The telecommunications industry is characterized by strong network effects. Each additional subscriber to a wireless network increases the network's value for all users. *Rural NPRM*, 18 FCC Rcd at 20807 ¶ 8 ("[N]etwork externalities occur when adding a user to a communications network increases the value of the network for existing users who wish to communicate with that new user."). Capturing these benefits is a driving force behind the federal policy of encouraging ubiquitous wireless service deployment, even in hard-to-serve rural areas. "[I]t is an especially important Commission goal to facilitate access to service broadly not just in urban markets but also in rural areas, to enable Americans who travel, reside or conduct business throughout the country to communicate effectively for the benefit of the general public interest." *Id.* at 20807-20808 ¶ 8. Just as policies that facilitate wireless service add value for all consumers, so too do policies, such as RF restrictions, that limit network coverage reduce such value.

2. Differing RF rules from one state to the next will also undermine the interoperability of wireless phones.

From the dawn of the cellular era, federal policy has sought to ensure that mobile phones are capable of working when they are taken from one state to the next.[10] In addition to providing consumers with better service, interoperability lowers prices by providing equipment manufacturers with a broader potential market.[11] Reliably "ubiquitous and seamless coverage" is now a consumer expectation that carriers strive to meet. *Rural NPRM*, 18 FCC Rcd at 20804 ¶ 2.

Regulatory uniformity may be unnecessary for some consumer products to work. Not so with mobile phones, which depend on a network of base stations. Underpowered handsets designed to conform to restrictive local RF requirements cannot help but experience coverage gaps when taken into states lacking such regulations.[12] Here, too, the effect will be most acute where carriers use larger cells to provide coverage. Likewise, citizens of states that decline to supplement federal RF rules may find that their phones are illegal when taken to a state with a lower RF ceiling or more restrictive design rules. In either case, the interoperability that is the goal of federal policy will be lost.

Reduced interoperability will reduce incentives for carriers to market services nationally, lest they be unable to

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[10] Report and Order, *An Inquiry Into the Use of the Bands 825-845 MHz and 870-890 MHz for Cellular Communications Systems*, 86 F.C.C.2d 469, 503 ¶ 79 (1981) ("Throughout the cellular proceeding an essential objective has been for cellular service to be designed to achieve nationwide compatibility. . . . [A] cellular subscriber traveling outside of his or her local service area should be able to communicate over a cellular system in another city.").

[11] *Id.* ("Nationwide compatibility is also likely to increase the number of manufacturers providing the cellular equipment. This price and product competition should benefit the consumer through lower equipment costs and greater equipment selection.").

[12] This is therefore not one of those cases in which the "limited extraterritorial effect" of a state regulation may preserve it from preemption. *Locke*, 529 U.S. at 112.

deliver a uniform service.[13] At times, offering a standard product will be impossible. For example, one state's jury may require headsets for mobile phones in order to minimize RF levels around the head. Another jury may forbid such headsets in order to minimize RF levels near the waist—which is where the phone would normally be held when using a headset like those demanded by Respondents. Pet. 13. If states chop up the market into a checkerboard of competing requirements, service providers will lose the economies of scale that are attainable in a national market.[14] Prices will rise as a result.

Alternatively, carriers and manufacturers may try to maintain a national and regional presence notwithstanding varying local entry rules. If so, the inevitable result will be a regulatory "race to the bottom." Carriers and manufacturers promoting nationally interoperable services and devices will try to provide phones that satisfy the requirements of all jurisdictions. They will design and market around the requirements of the state with the most restrictive RF regulations. The most burdensome RF rules will effectively set national policy, ousting the FCC of its congressionally mandated role as the authority over RF emissions.

3. The Fourth Circuit's embrace of local RF-based entry rules injects profound uncertainty into wireless network design and deployment. Section 332(c)(7) of the Act prohibits local authorities from "regulat[ing] the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions." 47 U.S.C. § 332(c)(7)(B)(iv). Yet the Fourth Circuit would effectively permit localities to do just

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[13] Rules that increase the costs of service in any one state will have the same effect by increasing the difficulty of offering a national "one-rate" plan.

[14] The situation for customer care centers will likewise be untenable as their advice to callers on phone operation will have to be tailored to the decisions of local juries rather than national rules. Widespread consumer confusion is the likely result.

that. As explained above, RF emissions from base stations and handsets are two sides of the same coin; both determine where a mobile phone will work. Lower-power phones mean smaller cells. Smaller cells mean more base stations if carriers are to maintain the quality of service that they have promised their customers. A state rule requiring handsets to reduce RF emissions is therefore indistinguishable from a mandate that carriers build and deploy more base stations.[15]

Building more base stations is hardly a simple solution. Cost is the first factor. The wireless industry already invests billions of dollars annually to improve network infrastructure and service for its customers. A Fourth Circuit-spurred building boom would needlessly divert resources to accommodate the demands of local regulators rather than customers. Of course, if carriers build these stations, providing service will become less economical, particularly in rural areas, *see Rural R&O*, 19 FCC Rcd at 19128 ¶ 88, leading to higher prices and reduced consumer choice.

The costs at issue extend beyond transmitter equipment and real estate. Base stations are typically deployed as transmitters atop towers. Building these towers is not easy. First, the range of permissible locations is constrained by demands of network design. In a cellular architecture, each base station is assigned certain radio frequencies for use in a given area, or cell. The range of each cell is defined, in turn, by the geographic area reached by radio signals emanating from the base station. To maintain full coverage, base stations must be located at or near the center of their assigned cell. *See* Rappaport, *supra*, at 59. By carefully spacing cells, a carrier may provide coverage in a manner that minimizes

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[15] This is another reason the Fourth Circuit erred in not finding the Respondents' claims preempted. *See Bastien* v. *AT&T Wireless Servs., Inc.*, 205 F.3d 984, 988 (7th Cir. 2000) ("The [Communications Act] makes the FCC responsible for determining the number, placement and operation of the cellular towers and other infrastructure.").

or eliminates gaps in coverage.[16] *See id.* at 58. Carrier choices of tower location are therefore limited.

Second, federal requirements further constrain location choices. Environmental effects must be considered, *see, e.g.*, 47 C.F.R. § 1.1307 (setting forth requirements for preparing detailed environmental assessments), as well as potential effects on historic sites of state or tribal interest, *see* Report and Order, *Nationwide Programmatic Agreement Regarding the Section 106 National Historic Preservation Act Review Process*, 20 FCC Rcd 1073 (2004). The FCC is also investigating the impact on migratory birds of collisions with cell towers. Notice of Inquiry, *Effects of Communications Towers on Migratory Birds*, 18 FCC Rcd 16938 (2003). Forcing carriers to build more towers than is absolutely necessary for efficient network management increases the potential for conflict with these federal policies.

Third, once a location is found that meets the first two conditions, carriers often face intense local opposition based on familiar "not-in-my-backyard" reactions. Oftentimes, the same groundless allegations of danger from mobile phones that are at the heart of the current litigation play a role in tower disputes. David W. Hughes, *When NIMBYs Attack: The Heights to Which Communities Will Climb to Prevent the Siting of Wireless Towers*, 23 J. Corp. L. 469, 495 (1998).

Section 332(c)(7) is intended to prevent local authorities from impeding carrier efforts to deploy towers. They may not "unreasonably discriminate" among similar service providers, 47 U.S.C. § 332(c)(7)(B)(i), prohibit or effectively prohibit the provision of personal wireless services, *id.*, unreasonably delay in acting on a request for authorization, *id.* § 332(c)(7)(B)(ii), deny applications unless the denials are in writing and supported by substantial evidence in the written record of proceedings, *id.* § 332(c)(7)(B)(iii), or regulate

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[16] Because network design decisions—including tower spacing—are made to reflect existing FCC rules, RF reductions that lead to gaps in coverage will likely require additional towers across the network, and not in isolated patches.

placement based on the effects of RF emissions, *id.* § 332(c)(7)(B)(iv). Despite these rules, the *Federal Reporter* and *Federal Supplement* are filled with examples of egregious actions by local authorities that forced carriers to seek a remedy in federal court. Many cases "follow an all too familiar pattern. A wireless provider submits an application to extend its cellular coverage in a locality, only to be confronted with politically motivated, interminable, delays and ineffectual excuses by local officials for their failure to act on the application in a timely fashion." *Omnipoint Commc'ns, Inc.* v. *Village of Tarrytown*, 302 F. Supp. 2d 205, 225 (S.D.N.Y. 2004).[17]

If the panel majority's decision stands, these collisions between local and federal law will only increase. Failure to grant the petition thus threatens the ironic consequence of heightening the conflict between state and federal interests that the panel majority tried and failed to reconcile.

III. Disparate State RF Regulation Threatens The Reliability Of Public Safety Communications

Congress enacted the Communications Act "for the purpose of the national defense [and] for the purpose of promoting safety of life and property through the use of wire and radio communications." 47 U.S.C. § 151. The FCC is trying to advance these goals through regulations designed to promote 911 services for citizens and robust communications capabilities for public safety officials. The decision below undermines both national policies by permitting states to interject themselves into issues of RF regulation.

1. A telephone is never more valuable than in an emergency. Accordingly, promoting access to 911 service is a longstanding federal policy. Just last year, Congress reaf-

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[17] *See also, e.g., Telespectrum, Inc.* v. *Public Serv. Comm'n of Ky.*, 227 F.3d 414, 424 (6th Cir. 2000); *Omnipoint Holdings, Inc.* v. *Town of Westford*, 206 F. Supp. 2d 166, 172 (D. Mass. 2002); *Nextel Partners, Inc.* v. *Town of Amherst*, 251 F. Supp. 2d 1187, 1194-1195, 1201 (W.D.N.Y 2003).

firmed the importance of broad 911 availability "for the sake of our Nation's homeland security and public safety." ENHANCE 911 Act of 2004, Pub. L. 108-494, § 102, 118 Stat. 3986, 3986.

To ensure the universal availability of 911 services, the FCC has issued rules directing that wireless phones be connected to the emergency 911 network. Report and Order and Further Notice of Proposed Rulemaking, *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, 11 FCC Rcd 18676 (1996). Providing wireless 911 service posed, and continues to present, daunting technical challenges. Even basic 911 service, which simply connects wireless calls to a public safety answering point ("PSAP"), is complicated. Customers may not be in their carrier's network when dialing 911, and the local carrier may use different technology to provide service. *Id.* at 18680 ¶ 7. Despite these challenges, almost all carriers, wireless and wireline alike, provide basic 911 service today. 47 C.F.R. §§ 20.18(b), 64.3001, 64.3002; First Report and Order and Notice of Proposed Rulemaking, *E911 Requirements for IP-Enabled Service Providers*, 2005 WL 1323217, ___ FCC Rcd ___ ¶ 8 (2005).

State regulations that limit the power of mobile phones threaten to roll back this progress. Wireless phones that cannot reach the nearest tower are useless for 911 purposes. The importance of these considerations cannot be overstated. Americans make 200 million 911 calls per year. *Id.*, 2005 WL 1323217, ¶ 6. About one third of these calls are made from wireless phones. Fact Sheet, *Wireless 911 Services*, FCC Consumer & Governmental Affairs Bureau, *available at* http://www.fcc.gov/cgb/consumerfacts/wireless911srvc.html (last visited Oct. 3, 2005). State regulations, however well-intentioned, that leave parts of the country without wireless coverage undermine federal policies designed to promote 911 service.

2. State RF regulations also endanger federal efforts to promote enhanced 911 ("E911") service. Basic 911 service does not automatically provide the PSAP with the caller's

location. This information is necessary when stress, duress, or an unfamiliar setting prevents a caller from telling emergency operators where he or she is. E911 service addresses this problem by automatically providing the PSAP with the caller's phone number and location. The FCC's 911 regulations require wireless carriers to offer E911 capability. Phase I of these rules requires that wireless phones be able to send the telephone number of a 911 caller as well as the location of the cell site or base station receiving the call. 47 C.F.R. § 20.18(d). Phase II, which is currently under implementation, requires that the specific location of the caller be transmitted. *Id.* § 20.18(e).

E911 is not a technical challenge for traditional wireline phones, which have a fixed location that can be automatically associated with the caller's phone number. In contrast, automatically providing location data from a wireless phone is difficult given the phone's mobility. Wireless carriers have developed a variety of technical solutions to the problem. Some carriers rely on multiple receivers within their networks. These receivers detect the caller's signal and then use triangulation to determine the caller's precise location. An alternative approach is to use GPS technology located within the mobile phone itself to determine location. *See generally* FCC Amended Report to Congress on the Deployment of E-911 Phase II Services by Tier III Service Providers: Submitted Pursuant to Public Law No. 108-494, at 7-10 (Apr. 1, 2005) (describing various methods), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-05-79A1.pdf.

State rules limiting RF emissions will frustrate E911 deployment. Of course, where emissions restrictions create coverage gaps, no 911 call will be possible in the first place (making the question of transmitting location information moot). Local RF restrictions will also limit E911 availability for carriers using network-based technology. This technology cannot locate the user unless *multiple* locations are able to detect the handset's signal. Establishing a link with the nearest base station is not enough; the signal must be strong

enough to reach additional receivers for the necessary triangulation. Under the panel majority's rule, however, E911 service will forever be at the mercy of an ill-timed jury decision. A shift in local policy could reduce handset power and limit E911 availability until expensive new receiving stations are built, if not indefinitely.[18]

The dangers described here are heightened by the fact that the provision of E911 presents challenges beyond selecting the proper wireless location technology. Effective E911 demands coordination among wireless carriers, their equipment providers, and approximately 8,000 PSAPs nationwide. Full E911 deployment requires differing carrier technologies using multiple RF bands to interact with existing wireline 911 technology that is in many cases aging or outdated. Dale N. Hatfield, *A Report on Technical and Operational Issues Impacting the Provision of Wireless Enhanced 911 Services* 18-19, *available at* http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6513296239 (last visited Oct. 3, 2005). In light of the technical and structural challenges involved, the development of wireless E911 services has been a long process since the FCC issued its first order in 1996. As it is, many carriers are struggling to meet Phase II timetables. *See, e.g.*, Order, *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, 20 FCC Rcd 7709 (2005) (evaluating requests for extension of E911 deadlines). Interference from local tort actions will only increase these difficulties.

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[18] Local RF restrictions will also undermine handset-based solutions. In rural areas, handset-based E911 deployment is already slowed by the reluctance of subscribers to trade in higher powered analog phones for lower powered, but E911-enabled, substitutes. *See* National Association of Regulatory Utility Commissioners, *Resolution Regarding the Suspension or Waiver of the December 31, 2005 Deadline for 95 Percent Penetration of Location-Capable Handsets* (adopted July 27, 2005), *available at* http://www.naruc.org/associations/1773/files/LocationCapableHandsets_s0705.pdf. Limitations on RF emissions that further limit the range of new phones can only exacerbate this dynamic.

3. The FCC has recognized that "[t]he Homeland Security obligations of the Nation's public safety agencies make it imperative that their communications systems are robust and highly reliable." Report and Order, *Improving Public Safety Communications in the 800 MHz Band*, 19 FCC Rcd 14969, 14971 ¶ 1 (2004) ("*Public Safety Order*"). Recent natural disasters have only reinforced the truth of this observation. But public safety officials may find their ability to communicate hampered by the development of local RF standards or operational requirements.

First, public safety providers frequently use consumer devices, and the wireless industry has worked closely with local and national authorities to ensure that wireless networks are available in emergencies. At the federal level, the industry has engaged in cooperative efforts with the Department of Homeland Security's Wireless Priority Service. This service ensures that key personnel will have priority access to a portion of the wireless network during emergencies even if the networks are congested. *See generally* http://wps.ncs.gov/; 47 C.F.R. § 64.402. Local policies that decrease the reach or reliability of public networks therefore limit the Nation's emergency communications capability.

Second, equipment designed specifically for use by public safety providers is also subject to FCC RF limits. State-by-state second-guessing of these standards therefore creates the same potential for coverage gaps and reduced interoperability in public safety networks that it creates with respect to consumer devices. Indeed, public safety devices tend to operate at higher power levels than do their civilian counterparts, as they tend not to be deployed in a cellular architecture and thus cover larger areas. *Public Safety Order*, 19 FCC Rcd at 14972 ¶ 2. They are therefore more vulnerable to the effects of restrictive policies. Once again, the consequences will extend beyond any one state's borders. If public safety communications equipment is not interoperable across state lines, interstate deployment of personnel in emergencies will likely be hampered.

CONCLUSION

The petition for a writ of certiorari should be granted.

Respectfully submitted.

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IN THE

Supreme Court of the United States

NOKIA, INC., ET AL.,

Petitioners,

v.

GARRETT NAQUIN, ET AL.,

Respondents.

On Petition for a Writ of Certiorari to the United States Court of Appeals for the Fourth Circuit

BRIEF OF *AMICUS CURIAE* THE AMERICAN NATIONAL STANDARDS INSTITUTE, INC. IN SUPPORT OF THE PETITION FOR A WRIT OF CERTIORARI

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STATUTES

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Pub. L. No. 104-204, § 704(b), 110 Stat. 56 (1996) 2, 3

ADMINISTRATIVE MATERIALS

Department of Commerce, *Standards and Competitiveness, Coordinating for Results* 12 (2004) 12
Federal Communications Commission, *Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation*, 11 F.C.C.R. 15123 (1996) 3, 10
National Institute of Standards and Technology, Department of Commerce, *Eighth Annual Report on Federal Agency Use of Voluntary Consensus Standards and Conformity Assessment* (2004) 6
National Institute of Standards and NTTAA Technology, Department of Commerce, *NTTAA: Frequently Asked Questions, available at* http://ts.nist.gov/ts/htdocs/210/nttaa/nttaa-qa.htm 11

TABLE OF AUTHORITIES—Continued

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Office of Management and Budget, Executive Office of the President, OMB Circular A-119, *Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities*, 63 Fed. Reg. 8,545 (Feb. 19, 1998) 13

LEGISLATIVE MATERIALS

H. R. Rep. No. 104-204 (1995) 3, 11

Representative George E. Brown, Jr., Statement, 142 Cong. Rec. H1266 (daily ed. Feb. 27, 1996) 7

Senator Rockefeller, Statement, 142 Cong. Rec. S1078 (daily ed. Feb. 7, 1996) 13

MISCELLANEOUS

ANSI, *ANSI Auditing Policy and Procedures* (2005), *available at* http://public.ansi.org/ansionline/Documents/Standards%20Activities/American%20National%20Standards/Procedures,%20Guides,%20and%20Forms/ 4

ANSI, *National Standards Strategy for the United States*, (2000) *available at* http://www.ansi.org/standards_activities/nss/nss.aspx?menuid=3#1 11

ANSI, *Procedures for Management and Coordination of American National Standards* (1974) *available at* http://public.ansi.org/ansionline/Documents/Standards%20Activities/American%20National%20Standards/Procedures,%20Guides,%20and%20Forms/ANS%20Procedures%20-%20 Historical/ANSIPR01974.pdf 5

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ANSI, *ANSI Essential Requirements: Due process requirements for American National Standards, available at* http://www.ansi.org/about_ansi/introduction/introduction.aspx?menuid=1 6

ANSI, Constitution and Bylaws, (January 2005), *available at* http://public.ansi.org/ansionline/Documents/About%20ANSI 5

B. Blake Levitt, *Electromagnetic Fields* (Harcourt Grace & Co.) (1995) 8

Gregory Tassey, National Institute of Standards and Technology, *Standardization in Technology-Based Markets* (n.d.) 12

J.M. Osepchuk & R.C. Petersen, *Historical Review of RF Exposure Standards and the International Committee on Electromagnetic Safety (ICES)*, 6 Bioelectromagnetics Supplement S7 (2003) 8, 11, 14

Joseph Farrell & Garth Saloner, *Coordination through Committees and Markets*, 19 Rand J. Econ. 235 (1988) 11

IN THE

Supreme Court of the United States

No. 05-198

NOKIA, INC., ET AL.,

Petitioners,

v.

GARRETT NAQUIN, ET AL.,

Respondents.

On Petition for a Writ of Certiorari to the United States Court of Appeals for the Fourth Circuit

BRIEF OF *AMICUS CURIAE* THE AMERICAN NATIONAL STANDARDS INSTITUTE, INC. IN SUPPORT OF THE PETITION FOR A WRIT OF CERTIORARI

INTEREST OF *AMICUS CURIAE*

Amicus Curiae, the American National Standards Institute, Inc. ("ANSI"), respectfully submits this brief in support of Petitioners.[1] ANSI is a private, non-profit organization that

[1] Pursuant to Supreme Court Rule 37.2(a) *Amicus Curiae* certifies that this brief is filed with the written consent of all parties; those consents have been lodged with the Clerk of the Court simultaneously with the filing of this brief. Pursuant to Supreme Court Rule 37.6, *amicus curiae* also certifies that no counsel for either party authored the brief in whole or in part, and that no person or entity, other than *amicus curiae* and its

administers the voluntary standardization and conformity assessment system in the United States. ANSI is not responsible for developing the technical content of standards. Instead, it is the accreditor of voluntary consensus standards-developing organizations ("SDOs") and many of the standards they develop. ANSI accreditation signifies that the procedures SDOs use when developing a standard meet ANSI's essential requirements for due process.

Amicus Curiae files this brief because of its strong interest in protecting the U.S. system of consensus standards and the federal government's reliance on that system. The *Naquin* Plaintiffs-Respondents argue that their cellular telephones, all of which comply with Federal Communications Commission ("FCC") radiofrequency ("RF") testing and emission standards and regulations, are nonetheless unsafe. The FCC standards at issue are based in part upon standards developed using ANSI's procedures, which ANSI approved.

Participation of *Amicus Curiae* will assist the Court in understanding the development of the ANSI standards that the FCC adopted. It also will aid the Court in understanding why allowing lay juries to revisit the technical merit of the standard in the context of piecemeal state court litigation is both bad law and bad policy. There is no doubt that Congress charged expert federal agencies, led by the FCC, with developing the proper balance among the policy interests encompassed within the Telecommunications Act of 1996, Pub. L. No. 104-204, § 704(b), 110 Stat. 56. The FCC's reliance on ANSI standards was consistent with the policy of both the Congress and the Executive Branch to partner with properly accredited national standard-setting bodies to achieve cost-efficiency and the optimal result in regulatory action based on scientific consensus. The Fourth Circuit

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counsel, made any monetary contribution to the preparation or submission of this brief.

decision opens the door to state court attacks on such federal regulatory standards and on the standard-setting bodies themselves, many of whom are increasingly named in class action lawsuits as part of an alleged "civil conspiracy." Allowing such suits to go forward will lead to public confusion on scientific issues, will undermine public confidence in any technical standard, and will have a chilling effect on the congressionally mandated partnership between federal agencies and the voluntary consensus standards community.

SUMMARY OF THE ARGUMENT

In the Telecommunications Act of 1996, Congress mandated FCC adoption of a national standard for radiofrequency emissions that addressed two policy interests: protection of the public health and safety, and rapid deployment of a competitive wireless telecommunications system. Pub. L. No. 104-204, § 704(b), 110 Stat. 56 (1996); H. R. Rep. No. 104-204, at 94 (I) (1995). The FCC adopted a standard that achieved these objectives through the collaboration of multiple federal agencies and the consensus of the voluntary standards community. *See Guidelines for Evaluating the Envtl. Effects of Radiofrequency Radiation*, 11 F.C.C.R. 15123, 15123 ¶2 (1996) ("FCC First Order"). It is unlikely the Respondents could obtain a superior result in effectuating this legislative mandate through piecemeal tort litigation.

ANSI urges this Court to uphold the preemptive force of technical standards developed in an open manner, respectful of due process, through which the consensus of federal agencies, experts and other interested persons was achieved. Denying the preemptive force of such standards will impose on judges or juries the unenviable task of re-evaluating the validity of the standards within the confines of state court litigation. Such an approach would upset the delicate balance of interests the FCC selected for a technology that transcends state and even international boundaries. It also destabilizes

the existing framework within which national technical standards are developed with broad participation and expert input.

The establishment of a multitude of inconsistent or conflicting standards by lay judges and juries presented with limited evidence will negatively impact the availability of a competitive wireless telecommunications system in the United States. And, allowing a patchwork of standards will defeat the voluntary consensus standardization system that Congress has directed remain an integral part of the federal regulatory process.

ARGUMENT

I. THE FCC STANDARDS REFLECT A HISTORY OF COLLABORATION AND CONSENSUS OF SCIENTIFIC EXPERTS AND FEDERAL AGENCIES.

A. ANSI's system of consensus standards has long provided a strong basis for federal regulation.

A standard is a document, established by consensus of subject matter experts and approved by a recognized body, which provides rules, guidelines or characteristics for a product for common and repeated use. Manufacturers need standards to determine the performance requirements for products they design, make and sell, and they need test procedures to assess conformity to those requirements. Purchasers and users rely on established standards to select the products appropriate for their needs. Standards exist across many industries, including telecommunications, information processing, safety and health, petroleum, medical devices, and more. *See* ANSI, *ANSI Auditing Policy and Procedures* (2005), *available at* http://public.ansi.org/ansionline/Documents/Standards%20Activities/American%20National%20Standards/Procedures,%20Guides,%20and%20Forms/.

In the standards community, one of the more familiar names is ANSI, though ANSI's role is frequently misunderstood. Founded in 1918 as the American Engineering Standards Committee, ANSI began as a federation of several prominent standards-developing organizations. ANSI continues today as the coordinator of the voluntary[2] consensus standards system in the United States. ANSI has served in this capacity for more than eighty years.

ANSI does not develop standards itself. *See* ANSI, Constitution and Bylaws, art. 1, § 1.03 (January 2005), *available at* http://public.ansi.org/ansionline/Documents/About%20ANSI. Instead, it coordinates the activities of organizations in the U.S. that develop standards, and provides a neutral forum for the development of policies on standards issues. To that end, ANSI accredits both standards-developing organizations, and the standards themselves, provided the accredited developer demonstrates adherence to certain procedures. Open participation, due process and consensus are necessary for ANSI accreditation.

Since 1974, the ANSI Board of Standards Review ("BSR") has been responsible for approving standards as American National Standards ("ANSs") and hearing any appeals regarding them. *See* ANSI, *Procedures for Management and Coordination of American National Standards* (1974) *at* http://public.ansi.org/ansionline/Documents/Standards%20Activities/American%20National%20Standards/Procedures,%20Guides,%20and%20Forms/ANS%20Procedures%20-%20Historical/ANSIPRO1974.pdf.

The BSR carefully reviews the standards SDOs submit that have unresolved objections on the record. Unresolved objec-

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[2] "Voluntary" refers only to the manner in which the standard was developed; it does not necessarily refer to whether compliance with a consensus standard is optional or whether a government entity or market sector has endorsed the document for mandatory use.

tions include both negative votes from within the SDO *and* public review comments. The BSR's approval of a standard is based on evidence the SDO provides of its procedural compliance—including openness, lack of dominance, balance, notice, consideration of objections, consensus, and internal appeals—not on a review of the technical content of the document. *See ANSI Essential Requirements: Due process requirements for American National Standards, available at* http://www.ansi.org/about_ansi/introduction/introduction.aspx?menuid=1. Without evaluating the technical content, the BSR considers whether the standard is generally contrary to the public interest, contains unfair provisions or is unsuitable for national use before approving it as an ANS. This basic formula has been the hallmark of ANSI's process for decades, and it has garnered world-wide respect.

B. The federal government recognizes the value of consensus standards and the expertise of organizations developing them.

The National Technology Transfer and Advancement Act of 1995, Pub. L. No. 104-113, §12, 110 Stat. 775, 782-783 (codified as amended in 15 U.S.C. § 272 (1996)) ("NTTAA"), requires federal agencies to rely upon—and participate in—the consensus standards and conformity assessment systems. *See* Nat'l Institute of Standards and Technology, Dep't of Commerce, *Eighth Annual Report on Federal Agency Use of Voluntary Consensus Standards and Conformity Assessment* 1 (2004) ("Federal agencies continue to look overwhelmingly to the private sector to fulfill government needs rather than creating new government-unique standards."). Congress adopted this policy, having concluded that consensus standards "are developed with great care and expertise in an open, democratic manner which makes U.S. voluntary standards the envy of the world . . . [t]hese groups are better equipped than the Government to understand all points of view and to keep up with the state of the art in technical standards." 142